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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,950	06/27/2001	Shunpei Yamazaki	07977/280001/US5027	6263
26171	7590	10/20/2004	EXAMINER	
FISH & RICHARDSON P.C. 1425 K STREET, N.W. 11TH FLOOR WASHINGTON, DC 20005-3500			EVERHART, CARIDAD	
			ART UNIT	PAPER NUMBER
			2825	

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

20

# **Office Action Summary**

Application No.

09/894,950

Applicant(s)

YAMAZAKI ET AL.

Examiner

Caridad M. Everhart

Art Unit

2825

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## **Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## **Status**

- 1) ☒ Responsive to communication(s) filed on 21 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-20, 32-50 and 55-58 is/are allowed.
- 6) ☒ Claim(s) 21-31, 51-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## **Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## **Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## **Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Applicant's arguments with respect to claims 21-31 and 51-54 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments have been persuasive with respect to claims 1-20 and claims 32-50 and 55-58. However, claims 21-31 and 51-54 do not recite the limitations with respect to the shielding film and with respect to the semiconductor layer formed so as to be in contact with the planarization layer. Rejection based on newly found prior art is applied below.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 21-32 and 51-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ma et al (US 2002/0142512A1).

Ma et al disclose the steps of forming on a substrate 10 a patterned conductor layer (paragraph 0038, first line). The substrate 10 may comprise an insulator layer because the disclosure is made that there are underlying layers (paragraph 0045). The dielectric layer 16 is formed (paragraph 0055, the lines following the middle of the paragraph). The dielectric is planarized by CMP (first half of paragraph 0055). The upper capacitance wiring is formed on the planarized dielectric layer (second half of paragraph 0055). The wiring overlap each other with the dielectric in between (Fig. 1).

Ma et al disclose the CMP of the dielectric wherein the dielectric is a bilayer (paragraph 0055). It would have been obvious to one of ordinary skill in the art that the dielectric could be formed as a single layer and then the CMP performed because the purpose is

to provide an upper surface which is planar for the upper conductor, which could be provided with the single layer which is then planarized by CMP.

With respect to the dimensions of the wiring, it would have been obvious to one of ordinary skill in the art to have chosen the wiring dimensions because this is a variable of the art which one of ordinary skill in the art would be able to determine. With respect to the shape of the conductors, in paragraph 0064 Ma et al disclose that other structures could be fabricated, which implies that other shapes known in the art, which would include tapering, are encompassed by the disclosure made by Ma et al. With respect to the devices comprising the device produced by the method, it would have been obvious to one of ordinary skill in the art to have used the device produced by the method disclosed by Ma et al in the recited devices because the recited devices are known in the art to comprise semiconductors which have capacitors and capacitance wiring, and the device disclosed by Ma et al is a capacitance wiring device.

***Allowable Subject Matter***

Claims 1-20, 32-50, and 55-58 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caridad M. Everhart whose telephone number is 571-272-1892. The examiner can normally be reached on Monday through Fridays 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on 571-272-1907. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2825

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C. Everhart  
10-17-2004

*C. Everhart*  
CARIDAD EVERHART  
PRIMARY EXAMINER